Indiana State Department of Health

Epidemiology Resource Center

Data Analysis

Indiana Behavioral Risk Factor Surveillance System Newsletter

Cancer Screenings
Data from the 2010 Indiana BRFSS

[Note: This article was originally published in the July/August 2011 Indiana Epidemiology Newsletter available at http://www.in.gov/isdh/files/Epi_V19_N04_2011_Jul_Aug.pdf]

Cancer is the second leading cause of death of Indiana residents. According to the Indiana Cancer Consortium (ICC), the state's vehicle for cancer control, about 85 residents are diagnosed with new cases of cancer every day. Timely cancer screenings for four cancers (breast, cervical, colon and rectal, and prostate) are valuable for early detection, which can save lives and increase treatment options. Developed by the ICC, the Indiana Cancer Control Plan 2010-2014 outlines early detection objectives and evidence based strategies to increase cancer screenings.

Many health conditions and behaviors are not reportable; hence, prevalence data must be obtained from another source. The Behavioral Risk Factor Surveillance Survey (BRFSS) is an annual random digit-dial telephone survey of adults aged 18 years and older. The BRFSS is conducted through a cooperative agreement with the Centers for Disease Control and Prevention, and all states and the District of Columbia participate.

The BRFSS relies on self-reported data. This type of survey has certain limitations that should be understood when interpreting the data. Many times, respondents have the tendency to underreport behaviors that may be considered socially unacceptable (e.g., smoking, driving after drinking alcohol). Conversely, respondents may overreport behaviors that are desirable (e.g., physical activity, fruit and vegetable consumption).

Information on cancer screenings of Indiana adults in this report was obtained from the 2010 BRFSS survey. Respondents were asked if they had had cancer screenings to detect cancers of the breast, cervix, colon and rectum, and prostate. Additional questions gathered information to determine if the screenings were done as recommended. These data support the evaluation of the Indiana Cancer Control Plan 2010-2014.

Breast Cancer

Currently, 60% of breast cancers are diagnosed at a localized stage, for which the five-year survival rate is 98% (SEER Cancer Statistics Review, 1975-2004, 2007). The American Cancer Society (ACS) screening guidelines recommend that average-risk women aged 40 years and older receive mammography screening on an annual basis.

According to the ACS, mammography usage has not increased since 2000. In 2010, 61.3% of Indiana females aged 40 years and older reported having a mammogram within the past 12 months compared to 65.3% nationally. Having a routine source of medical care is an indicator of access to preventive health care services and is related in part to health care coverage (ACS). Females with health care coverage were more likely than those without health care coverage to have had a mammogram within the past year (63.4% vs. 39.8%, respectively).

Females with one or multiple personal doctor(s) or health care provider(s) were more likely to have had a mammogram in the previous two years (62.7%) than those without one (34.3%). Females with a checkup in the past year were more likely to have had a mammogram in the past year (69.8%) than those with a checkup in the past one to two years (40.2%), two to five years (32.3%) and five or more years (28.6%). Females who were college graduates were more likely than those with less than a high school education to have had a mammogram in the past year (63.8% vs. 47.5%, respectively). Similar results were found by income. Per the Indiana Cancer Control Plan 2010-2014, the target breast cancer screening rate for 2014 is 67%. The ICC established the Breast and Cervical Cancer Action Team to address this priority objective, as well to increase cervical cancer screening rates.

Cervical Cancer

Most of the reduction in cervical cancer incidence and mortality rates has been attributed to the Pap test, which detects cervical cancer and precancerous lesions, and cervical cancer is now one of the most successfully controlled cancers in developed countries (ACS). The percent of females aged 18 years and over having a Pap test in the past three years has been stable from 2004-2010 in Indiana, which is similar to national findings.

The ACS recommends that cervical cancer screening should begin approximately three years after a woman begins having vaginal intercourse, but no later than 21 years of age. Screening should be done every year with conventional Pap tests or every two years using liquid-based Pap tests. Women aged 30 years and older should consult their physician for screening recommendations. Overall in 2010, 80.2% of Indiana women aged 18 years and older reported having a Pap test within the past three years; the target for 2014 is 87%. The national median was 81.0%. Black females were more likely than whites to have had a Pap test within the past three years (86.6% vs. 79.5%, respectively). The percent of females having a Pap test within the past three years decreased by age, from 90.2% for those aged 25-34 years to 58.6% for those aged 65+ and increased with income and education. As with mammograms, females with health care coverage, those with a health care provider and a regular checkup within the past two years were more likely than those without to have had a Pap test in the past three years.

Prostate Cancer

Other than skin cancer, prostate cancer is the most common type of cancer among American men, and is the second leading cause of cancer death. Mortality trends for prostate cancer have been declining.

The ACS recommends that asymptomatic men who have at least a 10-year life expectancy have an opportunity to make an informed decision with their health care provider about whether to be screened for prostate cancer after receiving information about the uncertainties, risks, and potential benefits associated with prostate cancer screening.

In 2010, 64.4% of males aged 40 and over reported ever having a prostate-specific antigen (PSA) test. The prevalence increased with age (22.8% for males aged 40-44 to 70.8% for 65+) and education (41.6% for less than high school education to 60.7% for college graduates). There were no differences among income levels.

About 53% (52.4) percent of males aged 40 years and older reported having a PSA test within the past two years. The prevalence increased with age (16.0% for males aged 40-44 years to 78.7% for males aged 65 years and older). College graduates were more likely than those with less than a college education to have had a PSA test within the past two years.

Males aged 40 or more years with health care coverage were more than twice as likely to have had a PSA test within the past two years (56.1% vs. 24.6%, respectively). Males without a health care provider were the least likely to have had a PSA test within the past two years (15.1%) compared to those with one (57.4%) or multiple health care professionals (62.9%).

Colorectal Cancer

Colorectal cancer is the third leading cause of cancer death in the US for both men and women. The relative five-year survival rate is 90% for colorectal patients diagnosed at an early, localized state; however, only 39% of cases are diagnosed at this stage. Of the 49,380 people expected to die from this cancer in 2011, screening/early detection tests could save more than half (ACS).

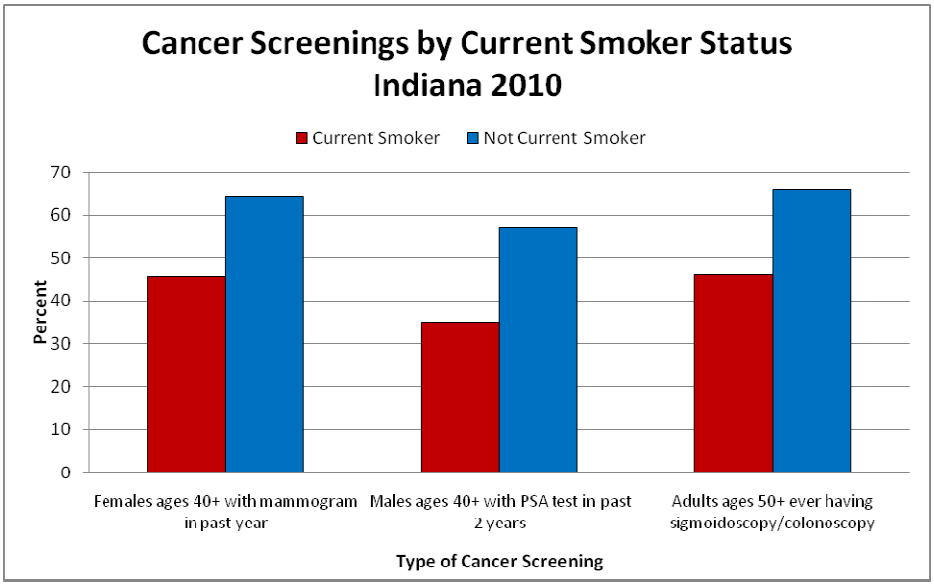
The ACS recommends that adults aged 50 years and older have a sigmoidoscopy every five years or a colonoscopy every 10 years. The percent of Indiana adults aged 50 years and over who have ever had a sigmoidoscopy or colonoscopy has increased dramatically from 44.1% in 2002 to 62.8% in 2010; the 2014 target is 67%. National results are similar. More Indiana adults reported having a colonoscopy than a sigmoidoscopy (93.7% vs. 6.3%). The percent of adults aged 50 and older who ever had a sigmoidoscopy or colonoscopy increased with age, education and income. There were no differences between white and black adults.

Adults with health care coverage were more likely than those without to have ever had a sigmoidoscopy or colonoscopy (65.1% vs. 37.7%, respectively). As with other cancer screenings, those with one or more health professionals were more likely than those without to have ever had a sigmoidoscopy or colonoscopy. Adults with a checkup in the past year were the most likely to have had a sigmoidoscopy or colonoscopy.

Current Smoking and Cancer Screenings

Tobacco use increases the risk of cancers of the colon/rectum and uterine cervix, and the Interagency for Research on Cancer recently concluded that there is limited evidence that tobacco smoking causes female breast cancer (ACS). In 2010 there were differences for having certain cancer screenings between current and not-current smokers (Figure 1). There were no differences among female current smokers and not current smokers for having had a Pap test within the past three years.

Figure 1



For additional information on these subjects, please visit the ICC website at http://indianacancer.org/ and the American Cancer Society at http://www.cancer.org/, and download a copy of the Indiana Cancer Control Plan 2010-2014.

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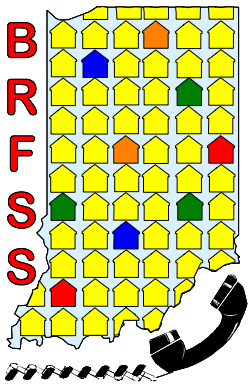

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BRFSS
Behavioral Risk Factor Surveillance System

Data and Statistics